

## PATENT CLAIMS

1. An antenna device for use with a radio transmitter (122) mounted in an electrical installation cabinet (100) such as a fuse box, where at least one electrical supply line (130) is passed through an opening (140) in the installation cabinet (100),

5 characterised in that it comprises a signal connection of the radio transmitter's antenna output (150) to a section of the supply line inside the installation cabinet (100), whereby the supply line (130) is employed as a travelling wave antenna for the radio transmitter (122).

10 2. A device according to claim 1,  
where the radio transmitter's antenna output (150) comprises a first (152) and a second (154) conductor, and  
where the signal connection is a galvanic connection, the device comprising contact devices for connecting the first conductor (152) to a first point (136) on the supply  
15 line and the second conductor (154) to a second point (138) on the supply line.

20 3. A device according to claim 2,  
designed as a cable terminal, arranged to enclose the supply line (130), where the contact devices comprise metallic contacts designed to be pressed through an insulation sheath (134) in order thereby to come into contact with the electrical conductor (132) in the supply line (130).

25 4. A device according to claim 1,  
where the radio transmitter's antenna output (150) comprises a first (152) and a second (154) conductor, and  
where the signal connection is a galvanic connection, the device comprising contact devices for connecting the first conductor (152) to a first point (136) on the supply  
line and the second conductor (154) to the installation cabinet's (100) chassis  
30 potential.

35 5. A device according to claim 1,  
where the radio transmitter's antenna output (150) comprises a first (152) and a second (154) conductor,  
where the signal connection is a capacitive coupling, the device comprising a first capacitive coupling element (137) for capacitive connection of the first conductor (152) to the section of the supply line and a second capacitive coupling element (139) for capacitive connection of the second conductor (154) to the installation cabinet's (100) chassis potential.

6. A device according to claim 1,  
where the radio transmitter's antenna output (150) comprises a first (152) and a

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second (154) conductor,  
where a first (230) and a second (330) supply line are passed through an opening in the installation cabinet, and

where the signal connection is a capacitive coupling, the device comprising

5 - a first capacitive coupling element (237) for capacitive connection of the first conductor (152) to a section of the first supply line (230) inside the installation cabinet (100),

- a second capacitive coupling element (337) for capacitive connection of the second conductor (154) to a section of the second supply line (330) inside the

10 installation cabinet (100), and

- a third capacitive coupling element (239) for capacitive connection of the first (230) and second (330) supply lines inside the installation cabinet (100), designed in such a manner that the element creates an approximate short circuit for those frequencies employed by the radio transmitter (120).

15 7. A device according to one of the claims 1-6, where the radio transmitter (122) is a combined radio transmitter and receiver operating on a frequency greater than or equal to 60 MHz.

8. A remote reading device (120) for remote reading of an energy consumption meter (110), to be mounted in an electrical installation cabinet (100) such as a fuse box, where at least one electrical supply line (130) is passed through an opening in the installation cabinet (100), comprising

20 - a reading unit (124) for reading the supply meter (110),  
- a control unit (126), and  
- a radio transmitter (122),

25 characterised in that

it further comprises an antenna device for use with the radio transmitter, as indicated in one of the claims 1-6, whereby the supply line (130) is employed as a travelling wave antenna for the radio transmitter (122).

9. A remote reading device according to claim 8,

30 where the radio transmitter (122) is a combined radio transmitter and receiver operating on a frequency greater than or equal to 60 MHz.

10. A method for providing an antenna for a radio transmitter (122) mounted in an electrical installation cabinet (100) such as a fuse box, where at least one electrical supply line (130) is passed through an opening in the installation cabinet, 35 characterised in that it comprises

- signal connection of the radio transmitter's antenna output (150) to a section of the supply line (130) inside the installation cabinet, whereby the supply line (130) is employed as a travelling wave antenna for the radio transmitter (122).

11. A method as indicated in claim 10,  
where the radio transmitter is a combined radio transmitter and receiver operating  
on a frequency greater than or equal to 60 MHz.

5 12. The application of an electrical supply line, which is passed into or out of an  
electrical installation cabinet such as a fuse box, as a travelling wave antenna for a  
radio transmitter mounted inside the installation cabinet.

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